

What is claimed is:

1. A program software watermarking processing apparatus comprising:

an original program input section that inputs an
5 original program with a software watermarking;

a differential program input section that inputs
a differential program with a software watermarking to
update the original program;

a software watermarking extracting section that
10 extracts the software watermarking from the differential
program with the software watermarking;

a program update section that generates an updated
program by updating the original program using the
differential program with the watermark; and

15 a watermark inserting section that inserts the
software watermarking extracted from the differential
program into the updated program.

2. A program software watermarking processing
apparatus comprising:

20 an original program input section that inputs an
original program with a software watermarking;

a differential program input section that inputs
a differential program to update the original program;

a watermark input section that inputs a new software
25 watermarking;

a program update section that generates an updated
program by updating the original program using the

differential program; and

a watermark inserting section that inserts the new software watermarking into the updated program.

3. A program software watermarking processing
5 apparatus comprising:

an original program input section that inputs an original program with a software watermarking;

a differential program input section that inputs a differential program to update the original program;

10 a software watermarking extracting section that extracts the software watermarking from the original program;

a program update section that generates an updated program by updating the original program using the
15 differential program; and

a watermark inserting section that inserts the software watermarking extracted from the original program into the updated program.

4. A program software watermarking processing
20 apparatus comprising:

an original program input section that inputs an original program with a software watermarking;

a differential program input section that inputs a user differential program to generate an updated program
25 with a software watermarking from the original program with the software watermarking; and

a program update section that generates the updated

program with the software watermarking from the original program with the software watermarking using the user differential program.

5. A program software watermarking inserting apparatus
5 comprising:

an original program input section that inputs an original program;

an original watermark inserting section that adds a software watermarking to the original program to
10 generate the original program with the watermark;

an original program output section that transmits the original program with the watermark;

a differential program input section that inputs a differential program to update the original program;

15 a differential program watermark inserting section that inserts a software watermarking into the differential program to generate the differential program with the watermark; and

a differential program output section that
20 transmits the differential program with the watermark.

6. The program software watermarking inserting apparatus according to claim 5, where the software watermarking to insert into the differential program is different from the software watermarking to add to the
25 original program.

7. A program software watermarking inserting apparatus comprising:

an original program input section that inputs an original program;

a watermark inserting section that adds a software watermarking to the original program to generate the
5 original program with the software watermarking;

an original program output section that transmits the original program with the watermark;

a differential program input section that inputs an update differential program to update the original
10 program;

a program update section that generates an updated program by updating the original program using the update differential program;

a watermark inserting section that inserts a
15 software watermarking into the updated program to generate the updated program with the software watermarking;

a differential program generating section that generates a user differential program to generate the
20 updated program with the watermark from the original program with the watermark; and

a differential program transmitting section that transmits the user differential program.

8. The program software watermarking inserting
25 apparatus according to claim 7, further comprising:

a program managing section that generates a differential program between the original program and

the original program with the watermark to manage.

9. The program software watermarking inserting apparatus according to claim 7, further comprising:

5 a program managing section that generates a differential program between the updated program and the updated program with the watermark to manage.

10. A program unauthorized distribution prevention system comprising:

10 a program software watermarking inserting apparatus having:

an original program input section that inputs an original program;

15 an original watermark inserting section that adds a software watermarking to the original program to generate the original program with the software watermarking;

an original program output section that transmits the original program with the software watermarking;

20 a differential program input section that inputs a differential program to update the original program;

a differential program watermark inserting section that inserts a software watermarking into the differential program to generate the differential program with the software watermarking; and

25 a differential program output section that transmits the differential program with electronic the watermark,

and a program software watermarking processing apparatus having:

an original program input section that inputs the original program with the software watermarking;

5 a differential program input section that inputs the differential program with the software watermarking;

a software watermarking extracting section that extracts the software watermarking from the differential program with the software watermarking;

10 a program update section that generates an updated program by updating the original program using the differential program with the software watermarking; and

a watermark inserting section that inserts the software watermarking extracted from the differential
15 program into the updated program.

11. A program unauthorized distribution prevention system comprising:

a distribution source that transmits an original program with a software watermarking, a differential
20 program to update the original program, and a new software watermarking; and

the program software watermarking processing apparatus according to claim 2.

12. A program unauthorized distribution prevention
25 system comprising:

a distribution source that transmits an original program with a software watermarking, and a differential

program to update the original program; and

the program software watermarking processing apparatus according to claim 3.

13. A program unauthorized distribution prevention
5 system comprising:

a program software watermarking inserting apparatus
having:

an original program input section that inputs an
original program;

10 a watermark inserting section that adds a software
watermarking to the original program to generate the
original program with the software watermarking;

an original program output section that transmits
the original program with the watermark;

15 a differential program input section that inputs
an update differential program to update the original
program;

a program update section that generates an updated
program by updating the original program using the update
20 differential program;

a watermark inserting section that inserts a
software watermarking into the updated program to
generate the updated program with the software
watermarking;

25 a differential program generating section that
generates a user differential program to generate the
updated program with the watermark from the original

program with the watermark; and

a differential program transmitting section that transmits the user differential program, and

a program software watermarking processing
5 apparatus having:

an original program input section that inputs the original program with the watermark;

a differential program input section that inputs the user differential program; and

10 a program update section that generates an updated program with the software watermarking from the original program with the watermark using the user differential program.

14. A program software watermarking processing method,
15 comprising:

inputting an original program with a software watermarking;

inputting a differential program with a software watermarking to update the original program;

20 extracting the software watermarking from the differential program with the software watermarking;

generating an updated program by updating the original program using the differential program with the watermark; and

25 inserting the software watermarking extracted from the differential program into the updated program.

15. A program software watermarking processing method,

comprising:

inputting an original program with a software watermarking;

5 inputting a differential program to update the original program;

inputting a new software watermarking;

generating an updated program by updating the original program using the differential program; and

10 inserting the new software watermarking into the updated program.

16. A program software watermarking processing method, comprising:

inputting an original program with a software watermarking;

15 inputting a differential program to update the original program;

extracting the software watermarking from the original program;

20 generating an updated program by updating the original program using the differential program; and

inserting the software watermarking extracted from the original program into the updated program.

17. A program software watermarking processing method, comprising:

25 inputting an original program with a software watermarking;

inputting a user differential program to generate

an updated program with a software watermarking from the original program with the software watermarking; and

generating the updated program with the software watermarking from the original program with the software watermarking using the user differential program.

18. A program software watermarking processing method, comprising:

inputting an original program;

adding a software watermarking to the original program to generate the original program with the software watermarking;

transmitting the original program with the watermark;

inputting a differential program to update the original program;

inserting a software watermarking into the differential program to generate the differential program with the software watermarking; and

transmitting the differential program with the watermark.

19. A program software watermarking processing method, comprising:

inputting an original program;

adding a software watermarking to the original program to generate the original program with the software watermarking;

transmitting the original program with the

watermark;

inputting an update differential program to update
the original program;

generating an updated program by updating the
5 original program using the update differential program;

inserting a software watermarking into the updated
program to generate the updated program with the software
watermarking;

generating a user differential program to generate
10 the updated program with the watermark from the original
program with the watermark; and

transmitting the user differential program.

20. A program having a computer execute processing of:

inputting an original program with a software
15 watermarking;

inputting a differential program with a software
watermarking to update the original program;

extracting the software watermarking from the
differential program with the software watermarking;

20 generating an updated program by updating the
original program using the differential program with the
watermark; and

inserting the software watermarking extracted from
the differential program into the updated program.

25 21. A program having a computer execute processing of:

inputting an original program with a software
watermarking;

inputting a differential program to update the original program;

inputting a new software watermarking;

generating an updated program by updating the
5 original program using the differential program; and

inserting the new software watermarking into the updated program.

22. A program having a computer execute processing of:

inputting an original program with a software
10 watermarking;

inputting a differential program to update the original program;

extracting the software watermarking from the original program;

15 generating an updated program by updating the original program using the differential program; and

inserting the software watermarking extracted from the original program into the updated program.

23. A program having a computer execute processing of:

20 inputting an original program with a software watermarking;

inputting a user differential program to generate an updated program with a software watermarking from the original program with the software watermarking; and

25 generating the updated program with the software watermarking from the original program with the software watermarking using the user differential program.

24. A program having a computer execute processing of:
inputting an original program;
adding a software watermarking to the original
program to generate the original program with the software
5 watermarking;
transmitting the original program with the
watermark;
inputting a differential program to update the
original program;
10 inserting a software watermarking into the
differential program to generate the differential program
with the software watermarking; and
transmitting the differential program with the
watermark.
- 15 25. A program having a computer execute processing of:
inputting an original program;
adding a software watermarking to the original
program to generate the original program with the software
watermarking;
20 transmitting the original program with the
watermark;
inputting an update differential program to update
the original program;
generating an updated program by updating the
25 original program using the update differential program;
inserting a software watermarking into the updated
program to generate the updated program with the software

watermarking;

generating a user differential program to generate the updated program with the watermark from the original program with the watermark; and

5 transmitting the user differential program.

26. A storage medium that stores the program according to claim 20.